SHEDDING LIGHT ON THE RELATIONSHIP BETWEEN DYSKINESIA AND IMPULSIVE COMPULSIVE BEHAVIOUR DISORDERS IN PARKINSON’S DISEASE

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**Objectives**

Impulsive compulsive behaviour disorders (ICB) and dyskinesia are common and disabling complications occurring during the course of Parkinson’s disease (PD). Their pathophysiology is not clear yet, however an association has been suggested. In the present study we aimed to evaluate the relationship between the presence of dyskinesia objectively detected using a wearable device and the presence of active and past ICB in PD patients.

**Methods**

Patients’ demographic and clinical characteristics were gathered, PD medications were converted in total levodopa equivalent daily dose (LEDD) and LEDD dopamine-agonists. Patients were assessed with: Unified PD Rating Scale (UPDRS) parts I-IV and Rusk Dyskinesia Rating Scale (RDRS). To objectively measure dyskinesia we used a wearable devise, the Parkinson’s KinetiGraph™ system (PKG®), an accelerometry-based system for automated assessment of dyskinesia and bradykinesia. Past and active ICB were diagnosed with a semi-structured interview.

Questionnaire for Impulsive-Compulsive Disorders in PD Rating Scale (QUIP-RS) was employed to rate ICB severity. Psychiatric symptoms were evaluated including depression, anxiety, apathy and impulsivity.

**Results**

Fifty-five PD patients were evaluated (36 males, mean age 60.7±6.7; mean disease duration 10.5±4.9). Twenty-five patients (45%) had dyskinesia as per PKG ‘Percent Time in Dyskinesia’ score. Nineteen patients had ICB (34%). There was no difference in active/past ICB between patients with and without dyskinesia (p=0.8 and 0.6). Patients with dyskinesia had higher LEDD dopamine-agonists(p=0.005), UPDRS-IV (p=0.02), RDRS (p=0.002). There was no difference between groups in psychiatric symptoms. We categorized patients in 3 groups (none, mild/moderate and severe dyskinesia) and we found no difference among groups in any demographic, clinical, psychiatric and behavioural variable except for LEDD dopamine-agonists (p=0.004), UPDRS-IV (p=0.06), RDRS (p=0.004).Binary regression analysis did not show any association between the presence of dyskinesia and ICB, depression, anxiety, apathy and impulsivity.

**Conclusion**

Our data suggest that ICB and dyskinesia are common but unrelated disorders in PD.